DOCUMENT RESUME

ED 333 374 CS 212 663

AUTHOR	Simic, Marge; Smith, Carl, Comp.
TITLE	Applying Various Comprehension Strategies. Learning Package No. 8.
INSTITUTION	Indiana Univ., Bloomington. School of Education.
PUB DATE	90
NOTE	52p.; For other learning packages in this series, see CS 212 656-705. Some material in the packet may not be completely legible when reproduced; copies provided are the best available.
AVAILABLE FROM	Learning Packages, ERIC/RCS, Indiana University, Smith Research Center, Suite 150, 2805 E. 10th St., Bloomington, IN 47408-2698 ($14.00).
PUB TYPE	Guides - Classroom Use - Teaching Guides (For Teacher) (052) -- Collected Works - General (020)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Critical Thinking; Distance Education; Elementary Secondary Education; Higher Education; Inservice Teacher Education; *Reading Comprehension; *Reading Improvement; *Reading Instruction; Reading Processes; *Reading Skills; *Reading Strategies; Schemata (Cognition)
IDENTIFIERS	Metacomprehension

ABSTRACT

Originally developed for the Department of Defense Schools (DoDDS) system, this learning package on applying various comprehension strategies is designed for teachers who wish to upgrade or expand their teaching skills on their own. The package includes a comprehensive search of the ERIC database; a lecture giving an overview on the topic; the full text of several papers on the topic; copies of any existing ERIC/RCS publications on the topic; a set of guidelines for completing a goal statement, a reaction paper, and an application project; and an evaluation form. (MG)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED393874

ERIC/RCS
150 Smith Research Center
Indiana University
Bloomington, IN 47405

Learning Package #8

Applying Various Comprehension Strategies

BEST COPY AVAILABLE

CS212663

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Dr. Carl Smith
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☒ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

OVERVIEW

ERIC/RCS Learning Packages contain just what the practitioner needs for staff development workshops. Workshops can begin with an overview lecture , continue through readings and discussion material, and end with research projects and an annotated bibliography for further research.

Each learning package contains (1) a topic overview: a four-to-six page stage-setter; (2) in most cases, a digest of research: an ERIC summary of research on the topic written by a specialist; (3) a goal statement and a survey form; and (4) an extensive annotated bibliography of ERIC references.

Graduate-level university credit is available. For further information contact Indiana University School of Continuing Studies, Owen Hall #204, Bloomington, Indiana 47405. Enrollment in each course will be limited.

Applying Various Comprehension Strategies

by Marge Simic

Lecture

(All references are fully documented in enclosed bibliography, or on reference list attached to this lecture)

Each reader is unique. Each reader brings a unique set of background experiences to each reading act, and therefore each reader comprehends a little differently. This is as it should be.

Teachers must get students to be fairly self-initiating in a way which is compatible with what we know successful readers do. We know, for example, that successful readers are not necessarily people who whiz through a selection, reading it once as quickly as possible. Successful readers are readers who pause, think about why they are reading, alter their purposes for reading, and maybe even recycle through a text. Successful readers are not speed readers. Successful reading probably implies more reflective reading -- the willingness to pause and reflect, the willingness to go back into a text and revisit it from a different perspective. Good readers use a number of strategies in order to derive meaning from text.

Teachers must encourage readers to take active control of their own comprehension processes. Readers must actively chunk, select, organize, summarize, infer, elaborate, and so on. To stress that the reader is actively in control, we classify

comprehension processes as strategies. Strategies are active comprehension processes that a reader chooses in order to comprehend better. The teacher's responsibility must be to help students develop strategies for comprehension, strategies for discovering truth and wisdom on their own.

Effective instruction incorporates many recommended strategies into the teaching of reading. Teachers should integrate new strategies and/or adapt lessons to reflect these ideas as they emerge. Strategies must be selected based upon what is most appropriate for the children involved, and for the text involved.

A good reading lesson may include: 1) helping children tap into their prior knowledge of a subject, 2) setting purposes for reading, 3) making predictions, and 4) modeling the thought processes of both the teacher and the children to gain meaning from a selection. Students need instruction during the lesson to make them aware that these things are what they, as a good reader, need to be doing independently. Teacher approaches that can help students become active independent readers are strategies such as brainstorming, effective questioning, predicting, modeling, and story grammars. These particular strategies can be used effectively throughout the different stages of reading instruction.

Brainstorming

Brainstorming is a technique for finding out what children know about a topic (Baskill and Whitman, 1986). It involves the free association of ideas about a specific subject and the recording of children's responses, with no evaluation of the responses by classmates or the teacher. Brainstorming helps to develop children's knowledge of words they will come across in their reading. It can help to organize children's thinking for writing at a later time.

Students' ideas can be written on the board or on chart paper. These ideas can then be classified into categories so that students can focus their thinking on topics or main ideas that can be supported by the details they have listed.

Prediction

Prediction is important to the understanding of a story (Pearson, 1982). Predictions about a book, its characters, and so on can be made by simply having the students look at the title and the cover of the book. Prediction allows students to feel a closer involvement with, and makes them keep a closer watch on, a chosen future event, character, or outcome. When you ask them to predict what will happen in a story, they develop an investment in the characters upon whom they have focussed.

Predictions can be made orally while the teacher or a classmate records the responses on a chart or on the chalkboard, on tape, or in writing. After reading, always have the children

compare their predictions with the actual events in the story. Ask: "Which of your earlier predictions were correct? Which predictions did you have to change as you read?" As children discover new information, they adjust their predictions and/or create new ones. If the children have tape-recorded their predictions, have them play back the tape, make comparisons, and discuss.

Generating Questions

One way to actively involve children in a story or text is to ask them what questions they have about it before they begin to read (Wiesendanger, 1986). Asking such questions also improves their comprehension and subsequent recall of the story. One technique for having children generate their own questions about the story is to show them the cover of the book, talk with them about what they notice in the picture, and ask, "What questions do you have about the book just from looking at the cover?" Discussion of the students' questions is crucial to an effective reading lesson.

Questions should not be quizzes in search of "right" or "wrong" responses. Students should be asked to compare, contrast, predict, and relate to the text with which they are involved. Questions should invite students to extend their thinking beyond the simple recall of facts and details. Discussion of children's post-reading questions helps to identify areas of the story that they find unclear or unsettling.

Questioning should encourage students to go back to the text, and invite them to change their perspectives. Rereading a text can open up so many more avenues of thought. Text is rich with possibilities, and teachers must guide students to understanding that a single pass through a selection can be confining. Questions should not be "critical" of student interpretations, but challenge them to be critical thinkers regarding their own interpretations. Teachers must respect all students' interpretations, thus respecting more clearly the reader's role in the creation of meaning.

Setting Purposes

Researchers have found that comprehension is enhanced when children have a purpose for reading. A purpose can be generated by focusing upon a particular aspect of a story. By asking children to make a prediction about a certain aspect of a story, and then to read the next passage or chapter to find out if their prediction was confirmed, you give them a purpose for reading.

If you know what in particular you want your students to learn from reading the text, it's a good idea to make a statement about your objectives. Students might grasp the most important points in the text on their own, but stating objectives makes it more likely they will also recall certain details.

On some occasions, children may be asked to define their own purposes for reading. Children may be asked what questions they, not the teacher, want to pose about the story. Then the children read to find out the answers to their own questions. This approach lets children know that what they are interested in and what is important to them is valued and respected by their teacher. Children then not only have a purpose for reading, but also a sense of value for what they are reading.

Modeling

Modeling means showing children the thought processes you use as you read, or as you interpret what you read. Reading research has shown that teacher modeling is especially helpful for emergent readers and for poor readers (Paris, Oka, and DeBritto, 1983). Good readers seem to understand that reading involves applying different strategies to the reading of the text. Beginning readers and less fluent readers do not yet know what reading strategies are and how to apply them.

Keep in mind that you can model their thought processes for children at any time you are reading aloud. While reading orally, "think-aloud" -- verbalize your thoughts, exercise self-questioning. You may want to think-aloud about how you made inferences about a character during the reading of a story, or how and why you came to a particular conclusion at the end of a book. When you have completed the oral reading, encourage students to

add their thoughts to yours. After several modeling experiences, students can work with partners to practice think-alouds, taking turns in reading orally and sharing thoughts. Carefully developed materials should be used initially. Move then to school materials of various types and lengths. Finally, encourage readers to practice thinking through materials silently.

Story Grammar

A story grammar is a rule system for describing parts of a story. It helps children develop an understanding of the structure of a story. Research has shown that the use of story grammars increases children's reading comprehension and improves their organization of elements in their own writing (Lehr, 1987). A story grammar can help children develop that all-important "sense of story" in both their reading and their writing. After using the story grammar in a reading lesson, teachers may want to show students how to apply their understanding to the organization of their own writing.

Story grammars are like outlines, and thus are flexible. Appendix I is an example of just one of the many structures available for teacher/student use.

Comprehension instruction takes many forms. Teachers must be aware of various comprehension strategies and utilize a variety of these strategies with approaches that effectively meet the instructional needs of students. The overall approach to reading

comprehension instruction should be based on the principle that a good reader is an active reader. Teachers who realize that comprehension is best learned through real, meaningful reading tasks find that they can integrate reading strategies throughout the curriculum. Comprehension strategies must not be reserved for reading instruction only. Our teaching must focus on creating active readers who are actively creating meaning across the curriculum.

References

Baskill, J. and Whitman, P. (1986). *Whole Language Sourcebook: A Guide for Teachers of Grades One and Two*. Ontario, Canada: Scholastic - TAB Publications Ltd.

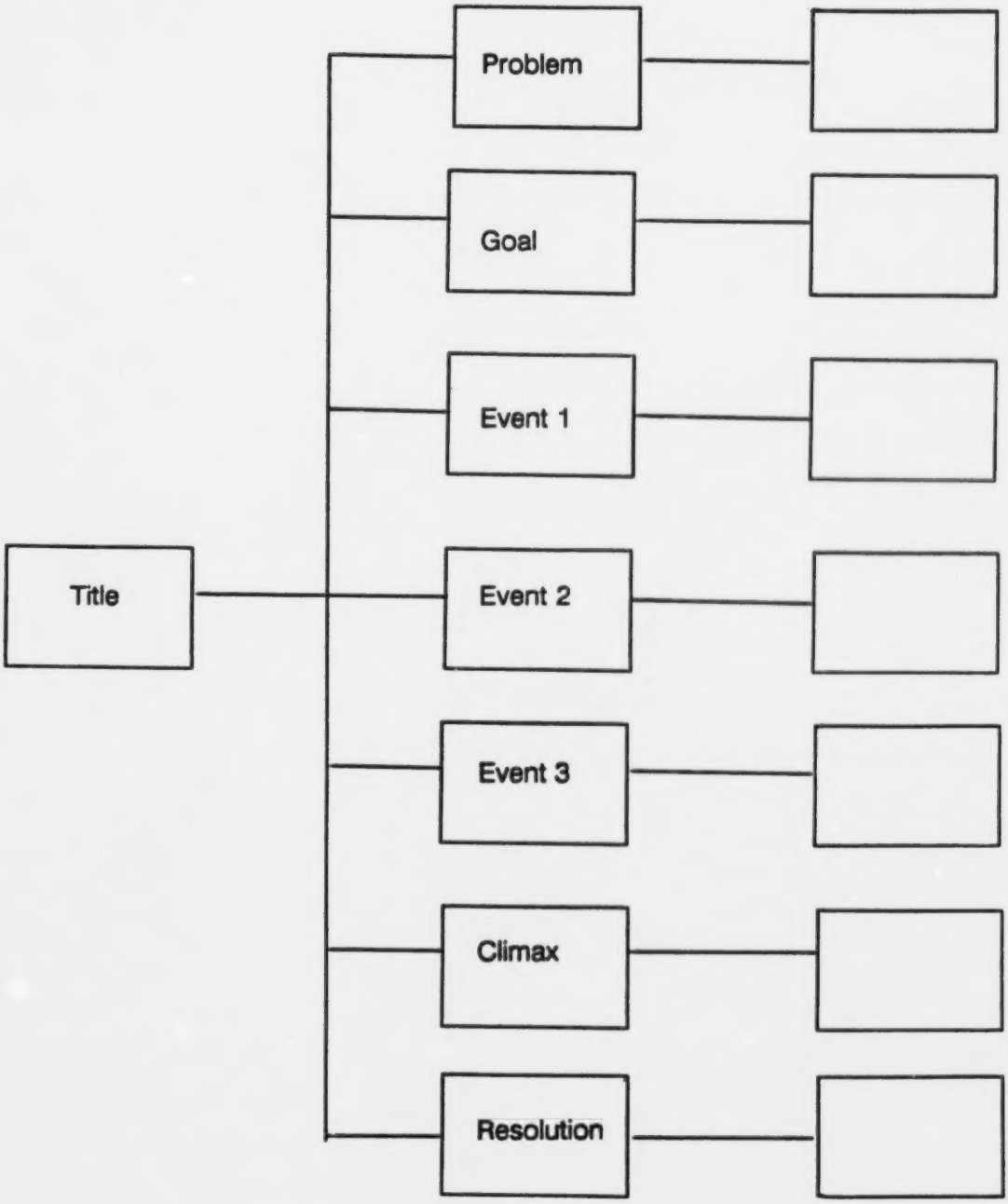
Lehr, F. (1987). Story Grammars. *The Reading Teacher*, 40 (6), 550-552.

Pearson, P. D. (1982). Asking Questions About Stories (Ginn Occasional Papers: Writings in Reading and Language Arts, No. 15). Columbus, OH: Ginn and Company.

Paris, S. G., Oka, E. R., and DeBritto, M. (1983). Beyond decoding: Synthesis of research on reading comprehension. *Educational Leadership*, 41 (2), 78-83.

Wiesendanger, K. D. (1986). Student generated questions develop independent readers. *The Reading Teacher*, 39 (6), 614-615.

Appendix I


Problem
Goal
Event 1
Title
Event 2
Event 3
Climax
Resolution

ERIC Digest

Clearinghouse on Reading and Communication Skills EDO-CS-91-03

Indiana University
2805 E. 10th St., Suite 150

D61

Bloomington, IN 47408-2698
(812) 855-5847

Increasing Comprehension by Activating Prior Knowledge

by William L. Christen and Thomas J. Murphy

The Research

Research has been conducted to determine the value of providing activities or strategies to assist in providing students with ways to activate their prior knowledge base. Studies looked at three possibilities: (1) building readers' background knowledge; (2) activating readers' existing background knowledge and attention focusing *before* reading; and (3) guiding readers *during* reading and providing review *after* reading.

It appears that when readers lack the prior knowledge necessary to read, three major instructional interventions need to be considered: (1) teach vocabulary as a prereading step; (2) provide experiences; and (3) introduce a conceptual framework that will enable students to build appropriate background for themselves.

Preteaching vocabulary (to increase learning from text materials) probably requires that the words to be taught must be key words in the target passages (Beck, *et al*, 1982; Kameenui, Carnine, *et al*, 1982), that words be taught in semantically and topically related sets so that word meaning and background knowledge improve concurrently (Beck et al., 1982; Stevens, 1982), and that only a few words be taught per lesson and per week (Beck et al., 1982; Kameenui et al., 1982; Stevens, 1982). To be an effective strategy, an extensive and long-term vocabulary strand accompanying a parallel schematic or background-knowledge-development strand is probably called for.

Research on *enriching background knowledge* has demonstrated that activating such knowledge increases comprehension. Graves and his associates (1980; 1983) developed previews for short stories that had, as one component, the building of prior knowledge important to understanding the selection. Data indicated that reading the previews before reading the stories increased students' learning from stories by a significant and impressive amount. Stevens (1982) increased learning from text compared with a control group for 10th-grade students reading a history passage by teaching them relevant background information for that passage. Hayes and Tierney (1982) found that presenting background information related to the topic to be learned helped readers learn from texts regardless of how that background information was presented or how specific or general it was. Alvarez (1990) used case-based instruction to develop students' abilities to assemble and incorporate different knowledge sources in memory. He taught them how to employ thematic organizers and hierarchical concept mapping in their reading.

Additionally, scant attention is paid to the role of the reader's schemata, or background knowledge, when learning from text (Tierney & Pearson, 1985). Yet research clearly emphasizes that for learning to occur, new information must be integrated with what the learner already knows (Rumelhart, 1980).

It appears that providing students with strategies to activate their prior knowledge base or to build a base if one does not exist is supported by the current research. It is our contention that this is one way teachers can have a positive influence on comprehension in their classrooms.

For example, Reutzel and Morgan (1990) advocate two pedagogical alternatives for teachers who wish to improve students' comprehension of causal relations which often are implicit in content area textbooks. Teachers may rewrite the text to make the cohesion relations explicit (a daunting task), or they may assist students in building, modifying, or elaborating their background knowledge prior to reading expository texts. Miholic (1990) outlines the construction of a semantic map for textbooks which he recommends for use at adult, secondary, and college level. For a class of gifted seventh grade students, Davis and Winek (1989) developed a project for building background knowledge so that the students could generate topics for writing articles in history. The teachers devoted one class period a week for eight weeks to various group activities to build background knowledge, culminating in prewriting activities focused on brainstorming for the eighth week. The articles were then written by the students at home.

William L. Christen is Director of Science and Social Studies in the Roosevelt School District, Phoenix, AZ. Thomas Murphy is a middle school language arts teacher in the Paradise Valley School District, Phoenix, AZ.

Classroom Implications

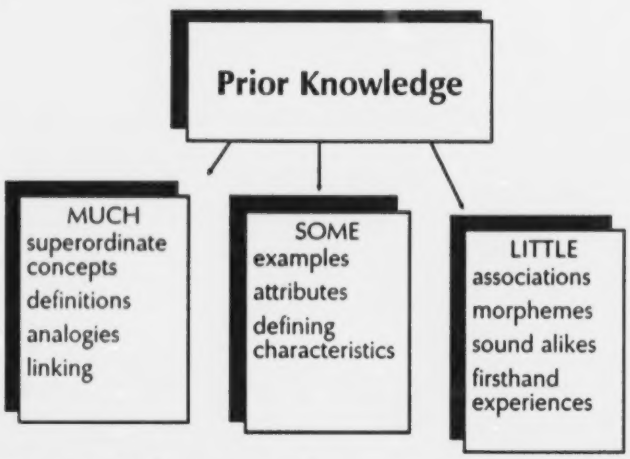
Engaging students in prior knowledge experiences becomes a form in classrooms where teachers value understanding what knowledge students possess. We know that prior knowledge is an important step in the learning process. It is a major factor in comprehension: that is, making sense of our learning experiences. Brain-based research confirms the fact that the learning environment needs to provide a setting that incorporates stability and familiarity. It should be able to satisfy the mind's enormous curiosity and hunger for discovery, challenge, and novelty. Creating an opportunity to challenge our students to call on their collective experiences (prior knowledge) is essential. Through this process we move students from memorizing information to meaningful learning and begin the journey of connecting learning events rather than remembering bits and pieces. Prior knowledge is an essential element in this quest for making meaning.

Level of Prior knowledge

Students generally fall into three categories: *much*, *some*, or *little* prior knowledge. In each instance, the teacher will make specific instructional decisions based on what is discovered in the prior knowledge part of the lesson. To check out what prior knowledge exists about a topic, idea, or concept, you may choose to do some of the following activities:

- *Brainstorm* the topic. Write all the information solicited from the students on the chalkboard, a piece of paper, or transparency.
- *Ask* specific and/or general questions about the topic. See what responses are given.
- *Pose* a *problem* or a *scenario*. Based on this description, find out what the students know about the idea presented.

Once the data is collected, a decision about the appropriate forms of instruction can be made. The following diagram can be helpful:



Teachers should remember to

(1) Present information which builds:

- **Background ideas**
- **Concepts**
- **Principles**

(2) Show, don't tell through—

- **Demonstrations**
- **Multi-media**
- **Graphics**

(3) Use outside resources, trips and speakers

(4) Tell about topic from your experience

(5) Use any combination of the above!

References

Alvarez, Marino C. "Knowledge Activation and Schema Construction." Paper presented at the Annual Meeting of the American Educational Research Association, Boston, MA, 1990, 25p. [ED 317 988]

Beck, Isabel L. et al. "Effects of Long-Term Vocabulary Instruction on Lexical Access and Reading Comprehension." *Journal of Educational Psychology* 74(4) August 1982, 506-21. [EJ 267 794]

Davis, Susan J. and Janice Winek. "Improving Expository Writing by Increasing Background Knowledge." *Journal of Reading* 33(3) December 1989, 178-81. [EJ 402 129]

Graves, Michael F. and C.L. Cook. "Effects of Previewing Difficult Short Stories for High School Students." *Research on Reading in Secondary Schools* 6, 1980, 38-54.

Graves, Michael F. et al. "Effects of Previewing Difficult Short Stories on Low Ability Junior High School Students' Comprehension Recall, and Attitudes." *Reading Research Quarterly* 18(3) Spring 1983, 262-76. [EJ 279 344]

Hayes, David A. and Robert J. Tierney. "Developing Readers Knowledge through Analogy." *Reading Research Quarterly* 17(2), 1982, 256-80. [EJ 257 814]

Kameenui, Edward J. et al. "Effects of Text Construction and Instructional Procedure for Teaching Word Meanings on Comprehension and Recall." *Reading Research Quarterly* 17(3) 1982, 367-88. [EJ 261 430]

Miholic, Vincent. "Constructing a Semantic Map for Textbooks." *Journal of Reading* 33(6) March 1990, 464-65. [EJ 405 094]

Reutzel, D. Ray and Bonnie C. Morgan. "Effects of Prior Knowledge, Explicitiness, and Clause Order on Children's Comprehension of Causal Relationships." *Reading Psychology* 11(2) 1990, 93-109. [EJ 408 397]

Rumelhart, Donald E. "Schemata: The Building Blocks of Cognition." In Rand J. Spiro et al., Eds. *Theoretical Issues in Reading Comprehension* (33-58). Hillsdale, NJ: Erlbaum, 1980.

Stevens, Kathleen C. "Can We Improve Reading by Teaching Background Information?" *Journal of Reading* 25(4) January 1982, 326-29. [EJ 257 791]

Tierney, Robert J. and P. David Pearson. "Learning to Learn from Texts: A Framework for Improving Classroom Practice." In H.S. Singer and R.B. Ruddell, Eds. *Theoretical Models and Processes of Reading* (860-78). Newark, DE: International Reading Association, 1985. [ED 262 389]

This publication was prepared with funding from the Office of Educational Research and Improvement, U.S. Department of Education, under contract no. RI88062001. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions, however, do not necessarily represent the official view or opinions of the Office of Educational Research and Improvement.

ERIC® CLEARINGHOUSE ON READING AND COMMUNICATION SKILLS

November 1989 DIGEST

Schema Activation, Construction, and Application

by Marino C. Alvarez and Victoria J. Risko

Readers rely on their prior knowledge and world experience when trying to comprehend a text. It is this organized knowledge that is accessed during reading that is referred to as schema (plural schemata). Readers make use of their schema when they can relate what they already know about a topic to the facts and ideas appearing in a text. The richer the schema is for a given topic the better a reader will understand the topic.

Schema theorists have advanced our understanding of reading comprehension by describing how prior knowledge can enhance a reader's interaction with the text. Accordingly, comprehension occurs when a reader is able to use prior knowledge and experience to interpret an author's message (Bransford, 1985; Norris & Phillips, 1987). Educators and researchers have suggested numerous instructional strategies to help students activate and use prior knowledge to aid comprehension. Yet, schema theory does not explain how readers modify and create new schema when presented with novel information in texts.

Schema Activation:

Because texts are never completely explicit, the reader must rely on preexisting schemata to provide plausible interpretations. Yet, there is much evidence that good and poor readers do not always use schemata appropriately or are unaware of whether the information they are reading is consistent with their existing knowledge. Also, there is evidence that students who do not spontaneously use schemata as they read will engage them if given explicit instructions prior to reading (e.g., Bransford, 1979).

Prereading strategies have been developed to help students relate new information appearing in written discourse to their existing knowledge. The design of many of these preorganizers reflects Ausubel's (1959) definition of readiness and the purpose of their use is to create a mind set prior to reading. These preorganizers have included advance organizers (Ausubel, 1960), structured overviews or graphic organizers (Alvermann, 1981), previews (Graves, *et al.*, 1983), concept maps (Novak & Gowin, 1984), and thematic organizers (Alvarez, 1980, 1983; Alvarez & Risko, 1989; Risko & Alvarez, 1986).

Schema Construction and Application:

Learning novel concepts may require the reader to connect new information to a congruent mental model. Mental models represent an individual's construal of existing knowledge and/or new information in the domain even though this information may be fragmentary, inaccurate, or inconsistent (Gentner & Gentner, 1983). A person's mental model is a representation of a particular belief based on existing knowledge of a physical system or a semantic representation depicted in a text. For example, a person may hold a belief that balls are round, inflatable and are made to bounce. However, this person may encounter a football (an ellipsoid) that is kicked or thrown, or ball bearings that are solid, or a bowling ball that is solid and has holes drilled into it for the purpose of rolling rather than bouncing. This new knowledge is integrated into a new, more complex, mental structure about the shape, substance, form, and function of balls.

As Bransford (1985) points out, schema activation and schema construction are two different problems. While it is possible to activate existing schemata with a given topic, it does not necessarily follow that a learner can use this activated knowledge to develop new knowledge and skills. Problem solving lessons and activities can provide learners with situations that aid in schema construction which includes critical thinking. Critical thinking theory enables a reader to analyze an ambiguous text. When versed in this process, a reader can either weigh alternative interpretations, dismiss others, make a decision to evaluate multiple possibilities, or accept the information as being reasonable. This process helps students to modify or extend their mental model, or existing knowledge base, for target concepts.

Several teacher-directed and self-initiated activities can be used to promote schema construction and application of knowledge to novel situations. Four such strategies that are designed to foster shared meaning between and among teachers and peers are: cases, interactive videodiscs, hierarchical concept maps, and Vee diagrams.

Cases that present learners with single and varied contexts across disciplines provide learners with scenarios that can be discussed and analyzed from multiple perspectives (e.g., see Christensen, 1987; Spiro, *et al.*, 1987). These cases can include written documents, recorded (musical as well as narrative) interludes, paintings, artifacts, video portrayals, and other pertinent substances and materials. Another teacher-directed strategy is the use of interactive videodiscs. Bransford and his colleagues are developing episodes, revolving around problem-oriented learning environments, that can be computer-accessed by learners to invite critical thinking and schema construction (see Bransford, *et al.*, 1989; Bransford, *et al.*, in press).

Hierarchical concept maps and Vee diagrams are two methods that students can initiate on their own for schema construction and application. Hierarchical concept maps (Novak & Gowin, 1984) are designed to help the reader clarify ambiguities of a text while simultaneously revealing any misconceptions that result from a reading. More importantly they provide the learner with a tool from which

Marina C. Alvarez is a professor at Tennessee State University; Victoria J. Risko is a professor at Peabody College of Vanderbilt University.

to initiate ideas that can be shared by visual inspection with someone else. The Vee diagram (Gowin, 1981/1987) is a method by which a learner can learn about the structure of knowledge and knowledge-making within a given discipline and use this knowledge in novel contexts.

Students can be taught to incorporate new information into their existing world knowledge. This can be accomplished through teacher guided instruction and self-initiated strategies that includes methods and meaningful materials that induce critical thinking with conceptual problems. In order for schema construction to occur, a framework needs to be provided that helps readers to elaborate upon new facts and ideas and to clarify their significance or relevance. Students need to learn more about themselves as learners. Notable in this learning context is the relationship between facts and ideas learned in formal school settings and those encountered in everyday learning environments. Perhaps within this inquiry we will be led to discover the ways individuals choose to relate new information to existing schemata and how this new information influences their future knowledge and decision-making.

Additional material on schemata can be found in the ERIC database. Some recent articles are:

Anstey, Michele. "Helping Children Learn How to Learn," *Australian Journal of Reading*, 11 (4) November 1988, p. 269-77. [EJ 383 664]

Blachowicz, Camille L. Z. and Fisher, Peter J. L. "Defining is an Unnatural Act: A Study of Written Definitions." Paper presented at the Annual Meeting of the National Reading Conference, 1988. 17 p. [ED 301 854]

Bloom, Charles P. "The Roles of Schemata in Memory for Text." *Discourse Processes*, 11 (3) July-September 1988, p. 305-18. [EJ 381 725]

Mealey, Donna L. and Nist, Sherrie L. "Postsecondary, Teacher Directed Comprehension Strategies," *Journal of Reading*, 32 (6) March 1989, p. 484-93. [EJ 383 759]

Scales, Alice M. ""Teaching College Reading and Study Skills Through a Metacognitive-Schema Approach." Paper presented at the Annual Meeting of the International Reading Association, 1987. 39 p. [ED 298 428]

References

Alvarez, M. (1983). Using a thematic pre-organizer and guided instruction as an aid to concept learning. *Reading Horizons, 24,* 51-58.

Alvarez, M. (1980). The effect of using an associate passage with guided instruction to evoke thematic conceptual linkage. *Dissertation Abstracts International, 41,* 1000A. (University Microfilms No. 8019163).

Alvarez, M. & Risko, V. (1989). Using a thematic organizer to facilitate transfer learning with college developmental studies students. *Reading Research and Instruction, 28,* 1-15.

Alvermann, D. (1981). The compensatory effect of graphic organizers in the learning and retention of meaningful verbal material. *Journal of Educational Research, 75,* 44-48.

Ausubel, D. (1960). The use of advance organizers in the learning and retention of meaningful verbal material. *Journal of Educational Psychology, 51,* 267-272.

Ausubel, D. (1959). Viewpoints from related disciplines: Human growth and development. *Teachers College Record, 60,* 245-254.

Bransford, J. (1985). Schema activation and schema acquisition. In H. Singer & R. B. Ruddell (Eds.), *Theoretical models and processes of reading*, 3rd ed. Newark, DE: International Reading Association, 385-397.

Bransford, J. (1979). *Human cognition: Learning, understanding, and remembering.* Belmont, CA: Wadsworth Publishing Company.

Bransford, J., *et al.*, (in press). Teaching thinking and content knowledge: Toward an integrated approach. In B. F. Jones & L. Idol (Eds.), *Dimensions of thinking and cognitive instruction.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Bransford, J., *et al.*, (1989). New approaches to instruction: because wisdom can't be told (pp. 470-497). In Vosniadou, S. & A. Ortony (Eds.), *Similarity and analogical reasoning.* New York: Cambridge University Press.

Christensen, C. (1987). *Teaching and the case method.* Boston, MA: Harvard Business School.

Gentner, D. & Gentner, D. (1983). Flowing waters or teeming crowds: Mental models of electricity (pp. 99-129). In D. Gentner & A. L. Stevens (Eds.), *Mental models.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Gowin, D. (1981/1987). *Educating.* Ithaca, NY: Cornell University Press.

Graves, M., *et al.*, (1983). Effects of previewing difficult short stories on low ability junior high school students' comprehension, recall, and attitudes. *Reading Research Quarterly, 18,* 262-276.

Norris, S. & Phillips, L. (1987). Explanations of reading comprehension: Schema theory and critical thinking theory. *Teachers College Record, 89,* 2, 281-306.

Novak, J. & Gowin, D. (1984). *Learning how to learn.* New York: Cambridge University Press.

Risko, V. & Alvarez, M. (1986). An investigation of poor readers' use of a thematic strategy to comprehend text. *Reading Research Quarterly, 21,* 298-316. [EJ 337 401]

Spiro, R., *et al.*, (1987). Knowledge acquisition for application: Cognitive flexibility and transfer in complex content domains (pp. 177-199). In B. K. Britton & S. M. Glynn (Eds.), *Executive control processes in reading.* Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

ERIC Clearinghouse on
Reading and Communication Skills
Indiana University
Smith Research Center
2805 East Tenth Street, Suite 150
Bloomington, IN 47405
(812) 855-5847

This publication was prepared with funding from the Office of Educational Research and Improvement, U.S. Department of Education, under contract no. RI88062001. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions, however, do not necessarily represent the official view or opinions of the Office of Educational Research and Improvement.

Task #1

Goal Statement

Your Name:_____

Course #:_____

Learning package:_____

The purpose of writing a goal statement is to create an expectation for yourself, to establish a purpose that you can check when you have finished reviewing the package of materials. It should be used in conjunction with your reaction statement--the commentary that you will make after working your way through the materials in the learning package.

Directions: This is a pre-reading activity. Think about the topic of this package and then look at the various materials, primarily reviewing their headlines and subheads. What does that review prompt you to want to discover through this package?

Write a goal statement of no more than one paragraph that includes the questions that you want answered or the kinds of applications that you hope the package will help you accomplish in your work. Attached please find examples of representative goal statements submitted by former students.

Mail a copy of your goal statement to your instructor. Please keep a copy for yourself because your reaction statement should be based partly on the goal statement.

My Goal Statement for this Package

Please mail a copy of this form to:

Carl B. Smith
150 Smith Research Center
Indiana University
Bloomington, IN 47408-2698

Examples of Goal Statements

It is my expectation that this learning package will direct me in new directions so that I may improve my instruction in the area of vocabulary. I would like to know when it is best to introduce new vocabulary words. I would also like to gain information about new methods one might use when introducing new vocabulary. I expect to read about some of the newest research related to vocabulary instruction. It is also expected that tested methods will be described and examined. I would hope that these articles would help me improve how I teach so that my students will benefit and become better readers.

Following the study of this package, I expect to increase my understanding of computer usage in reading development, learn how to integrate computers into reading and writing instruction for learning impaired students, and make decisions on the usefulness of computer games in the classroom.

Following completion of this package I intend to:
1)Identify the components of a formal reading program evaluation.
2)Analyze the characteristics of an effective reading program.
3)Develop evaluation strategies that will improve the monitoring of my program objectives.

Task #2

Reaction Statement

You are asked to type a four-page reaction to this learning package as a way of firming up your sense of what you find interesting, important, or beneficial in this group of materials. You should construct this reaction with your previously established goal statement in mind.

Given below are a number of prompts to indicate the kinds of questions that you might wish to answer in developing this reaction. You may use other questions than those that are here listed. We anticipate that your reaction will be approximately four typewritten, double-spaced pages. Please use the following format in heading your paper.

Reaction

Your Name:_____

Course #:_____

Learning Package:_____

Reaction Prompts

1. Were your goals realized, and how do you know? (Refer to your goal statement.)

2. What important or beneficial ideas did you find in these materials? (Please cite the articles.)

3. Are there trends or concerns in the materials that bother you? Are there those that you agree with? Discuss. (Please use the annotated bibliography and cite ideas from it.)

4. What ideas did you want to try in your daily work world? Describe how you could apply these ideas?

Application Project

If you decide to use this topic for one of your two application projects, you may want to spend more time thinking about ways that you could explore one or more of these ideas in your work.

When you have finished your statement, please mail it to:

Carl B. Smith
150 Smith Research Center
Indiana University
Bloomington, IN 47408-2698

Task #3

Application Project

As you select your two application projects, use the following guidelines:

1. **Formulate a question** that you would like to answer regarding this topic. (For example, can my slow readers use some of the self-monitoring strategies discussed in these materials?) A question often helps to clarify the kinds of information that you will collect or the kinds of evidence that you will use to convince a reader that you are pursuing an interesting question.

2. **Describe with as much detail** as is needed for a reader to understand what you did, what materials you used, what major procedures you used, what evidence you were looking for, in order to answer your question.

3. **Gather evidence** from your students or from teachers to show samples of the kinds of work or the kinds of interactions that were taking place. These samples may be your written observations, sample student papers, photographs, activity sheets, book titles, statistical data, or any other kind of evidence that demonstrates the reality of your inquiry.

4. **Write a summary** of your plan and of your conclusions. The summary should be coherent and clear so a person who was not on site can understand what you attempted and can appreciate the conclusions that you drew.

5. **Send a report** that includes a summary of your plan, sample evidence of what you found, a brief analysis of the evidence, and the conclusions that you

6. **Provide a cover page** that gives your name, address, course number, topic of learning package, and topic of your project. We will mail you a critique of your work. Send your report to:

   Carl B. Smith
   150 Smith Research Center
   Indiana University
   Bloomington, IN 47408-2698

Course Number_____ **Date**_____

Package Title_____

Statements	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1. This package will help me do my job better.					
2. The pace of the package was too fast.					
3. The package's directions were confusing.					
4. It was easy to follow the directions given in the package.					
5. The package was too easy.					
6. The package was too long.					
7. The package should include more articles and documents to read.					
8. I didn't know the meaning of many words used in the package.					
9. The lecture explicated the topic of the package.					
10. The package's objectives were clear from the start.					
11. The package's teaching points were clear.					

What did you like best about the package?

What did you like least about the package?

How would you improve the package?

Please list other topics you would be interested in studying through our program.

Name (optional)_____

Position_____

Years Taught_____

Please mail a copy of this form to:

Carl B. Smith
150 Smith Research Center
Indiana University
Bloomington, IN 47408-2698

ERIC/RCS

Selected Abstracts from the ERIC Database

ERIC Clearinghouse on Reading & Communication Skills
Indiana University
Bloomington, Indiana
(812) 855-5847

BEST COPY AVAILABLE

Sample ERIC Abstract

AN ED289160
AU Binkley,-Marilyn-R.; And-Others
TI Becoming a Nation of Readers: What Parents Can Do.
CS Heath (D.C.) and Co., Lexington, Mass,; Office of Educational Research and Improvement (ED), Washington, DC.
PY 1988
AV What Parents Can Do, Consumer Information Center, Pueblo, CO 81009 ($.50).
NT 40 p.; For Becoming a Nation of Readers: The Report of the Commission on Reading, see ED 253 865.
PR EDRS Price - MF01/PC02 Plus Postage.
DE Beginning-Reading; Literacy-Education; Parent-Attitudes; Parent-Child-Relationship; Preschool-Children; Primary-Education; Reading-Aloud-to-Others; Reading-Attitudes; Recreational-Reading; Written-Language
DE *Literacy-; *Parent-Influence; *Parent-Participation; *Reading-Instruction; *Reading-Processes
ID Reading-Motivation
AB Intended for parents and based on the premise that parents are their children's first and most important teachers, this booklet is a distillation of findings from the 1984 report of the Commission on Reading, "Becoming a Nation of Readers." The introduction reiterates the Commission's conclusions (1) that a parent is a child's first tutor in unraveling the puzzle of written language; (2) that parents should read to preschool children and informally teach them about reading and writing; and (3) that parents should support school-aged children's continued growth as readers. Chapter 1 defines reading as the process of constructing meaning from written texts, a complex skill requiring the coordination of a number of interrelated sources of information. Chapter 2, on the preschool years, focuses on talking to the young child, reading aloud to the preschooler, and teaching children about written language. The third chapter, on beginning reading, counsels parents on what to look for in good beginning reading programs in schools, and how to help the child with reading at home. The fourth chapter, on developing readers and making reading an integral part of learning, offers suggestions for helping the child succeed in school and for encouraging reading for fun. The afterword calls on teachers, publishers, and school personnel, as well as parents, to participate actively in creating a literate society. The booklet concludes with a list of organizations that provide practical help or publications for parents.

Interpretation of ERIC Abstract Field Identifiers

AN ERIC accession number (Use this number when ordering microfiche and paper copies.)
AU Author(s)
TI Title
CS Corporate source
PY Actual or approximate publication date
AV Source and price (availability)
NT Pagination and additional information (such as legibility or related documents)
PR Indicates availability of document from the ERIC Document Reproduction Service
DE Descriptors-indexing terms from the *Thesaurus of ERIC Descriptors* which indicate important concepts in the document
ID Identifiers-indexing terms not included in the *Thesaurus of ERIC Descriptors*
AB Summary

AN: ED302827
AU: Anthony,-Helene-M.; And-Others
TI: Reading Comprehension Research: A Selected Review. Technical Report No. 448.
CS: Bolt, Beranek and Newman, Inc., Cambridge, Mass.; Illinois Univ., Urbana. Center for the Study of Reading.
PY: 1989
NT: 30 p.
PR: EDRS Price - MF01/PC02 Plus Postage.
DE: Basal-Reading; Elementary-Secondary-Education; Metacognition-; Reader-Text-Relationship; Social-Influences; Vocabulary-Skills
DE: *Reading-Comprehension; *Reading-Instruction; *Reading-Processes; *Reading-Research; *Teaching-Methods
AB: This research review is an examination of representative studies on the nature of the reading process and of various instructional methods in reading deemed to be of interest to classroom teachers of reading. The review provides both a theoretical perspective and related empirical evidence to guide instructional practice and discusses the ways in which readers, text, and context interest and influence children's comprehension of text. The review begins with a brief historical overview of reading research, which provides a framework for discussing studies related to the characteristics of readers, text, and the social context. One figure is included, and 144 references are appended. (Author/MS)

AN: ED280011
AU: Anthony,-Helene-M.; Raphael,-Taffy-E.
TI: Using Questioning Strategies to Promote Students' Active Comprehension of Content Area Material. Occasional Paper No. 109.
CS: Michigan State Univ., East Lansing. Inst. for Research on Teaching.
PY: 1987
AV: Institute for Research on Teaching, College of Education, Michigan State University, 252 Erickson Hall, East Lansing, MI 48824 ($4.00).
NT: 44 p.
PR: EDRS Price - MF01/PC02 Plus Postage.
DE: Reader-Response; Reading-Research; Secondary-Education; Teacher-Role; Teacher-Student-Relationship; Teaching-Methods
DE: *Content-Area-Reading; *Questioning-Techniques; *Reader-Text-Relationship; *Reading-Comprehension; *Reading-Instruction; *Reading-Strategies
AB: To explore how instruction in questioning can enhance teachers' use of questions that promote comprehension and how teachers' instruction of students in such strategies can enhance their ability to comprehend content area texts independently, this paper looks at prereading, during-reading, and postreading questioning activities. The first major section of the paper discusses two kinds of conceptual knowledge involved in the comprehension of expository prose: text structure knowledge and knowledge of text processing strategies. The second section of the paper looks at the kinds of questioning strategies that have been effective in developing students'

comprehension of expository text. Specifically, it uses a reading lesson as a framework for discussing questions used in the prereading, during-reading, and postreading stages of the lesson. The third section of the paper examines the instructional methods that contribute to students' independent use of questioning strategies: (1) direct explanation and modeling, (2) guided practice, and (3) question answer relationships. The paper concludes by noting that the quantity of research focusing on questioning underscores the pervasiveness of questioning strategies in the classroom. (A six-page list of references is provided.) (FL)

AN: ED255866
AU: Baumann,-James-F.
TI: The Systematic, Intensive Instruction of Reading Comprehension Skills.
PY: 1984
NT: 13 p.; Paper presented at the Annual Meeting of the National Reading Conference (34th, St. Petersburg, FL, November 28-December 1, 1984).
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Behavioral-Objectives; Independent-Study; Reading-Research; Reading-Skills; Secondary-Education; Teacher-Behavior; Teaching-Methods
DE: *Directed-Reading-Activity; *Reading-Comprehension; *Reading-Instruction; *Reading-Strategies; *Teacher-Effectiveness; *Teacher-Role
AB: In direct instruction, the teacher, in a face-to-face, reasonably formal manner, tells, shows, models, demonstrates, and teaches the skill to be learned. Therefore, it is the teacher behavior aspect of classroom instruction that underpins the instructional strategy for teaching main ideas. Much has been learned about teacher behaviors that discriminate successful teachers from less successful teachers. Most of the teacher behaviors described in teacher effectiveness research cluster under the rubric "direct instruction." In a global sense, when direct instruction occurs, enough time is allocated to reading instruction, teachers accept responsibility for student achievement, and they expect that their students will learn. One direct instruction strategy for teaching students various reading comprehension skills is a five-step approach documented by the work and research of J. F. Baumann. The five steps consist of introduction, example, direct instruction, teacher directed application, and independent practice. That is, the teacher tells the students what the lesson will be about; the teacher provides an example; the teacher actually teaches the lesson; and then the teacher gradually releases responsibility for learning to the students through guided application exercises and by providing independent practice. (HOD)

AN: EJ331186
AU: Baumann,-James-F.; Schmitt,-Maribeth-Cassidy
TI: The What, Why, How, and When of Comprehension Instruction.

PY: 1986
JN: Reading-Teacher; v39 n7 p640-46 Mar 1986
AV: UMI
DE: Reading-Materials; Reading-Research; Teacher-Role; Teaching-Methods; Theory-Practice-Relationship
DE: *Cognitive-Processes; *Reading-Comprehension; *Reading-Instruction; *Reading-Skills; *Reading-Strategies
AB: Presents a direct instruction approach to reading comprehension that stresses the use of three forms of knowledge--declarative, procedural, and conditional. Offers a sample lesson demonstrating the application of this approach for teaching a comprehension skill, and concludes with a discussion of how comprehension skill instruction in commercial materials might be adapted or modified to include the knowledge forms. (FL)

AN: EJ325214
AU: Bean,-Thomas-W.
TI: Analogical Study Guides: Improving Comprehension in Science.
PY: 1985
JN: Journal-of-Reading; v29 n3 p246-50 Dec 1985
AV: UMI
DE: Cognitive-Processes; Educational-Theories; Schemata-Cognition; Science-Instruction; Secondary-Education; Study-Guides
DE: *Abstract-Reasoning; *Biology-; *Content-Area-Reading; *Prior-Learning; *Reading-Comprehension; *Teaching-Methods
AB: Describes a schema-theoretic view of how analogies enhance students' prior knowledge; reviews some of the recent studies using analogies to assist students' comprehension of science text; and illustrates the use of an analogical study guide in biology. (HOD)

AN: ED295944
AU: Bierschenk,-Bernhard
TI: The Cult of Understanding.
CS: Lund Univ. (Sweden). Cognitive Science Research.
PY: 1986
NT: 21 p.
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Foreign-Countries; Models-; Psycholinguistics-; Schemata-Cognition; Self-Concept
DE: *Artificial-Intelligence; *Cognitive-Processes; *Computer-Simulation; *Languages-; *Symbolism-
AB: Understanding is discussed with reference to an agent-action-objective model. The formalism developed controls the processes of differentiation and integration underlying understanding. The starting point is a culturally agreed-upon expectancy or prescription that defines a particular form of understanding. Central to an investigation of how scientists model understanding is how they conceive symbols. The collective cognitive impe ative in the scientific community states that symbols are abstract codes whose definitions are wholly arbitrary and, hence, can only be understood by

those who have a common outlook. Scientists working with the development of computer technology, especially within the field of artificial intelligence, have repeatedly pointed out that they have constructed models of understanding the natural language of significance for cognition-oriented research. Therefore, focus is on classical models. It appears that self-reference is an important constituent component in any model or theory of understanding. (TJH)

AN: EJ311583
AU: Blachowicz,-Camille-L.-Z.
TI: Reading and Remembering: A Constructivist Perspective on Reading Comprehension and Its Disorders.
PY: 1984
JN: Visible-Language; v18 n4 p391-403 Aut 1984
AV: UMI
NT: Thematic Issue: Psychological Processes in Reading.
DE: Elementary-Education; Knowledge-Level; Metacognition-; Models-; Schemata-Cognition
DE: *Cognitive-Processes; *Reading-Comprehension; *Reading-Difficulties; *Reading-Processes; *Reading-Research
AB: Provides an overview of the recent changes in the theoretical conception of memory and language comprehension and how these are influencing reading research, assessment, and teaching. (FL)

AN: ED292628
AU: Brownson,-Jean
TI: Using Knowledge To Build Knowledge: The Thematic Approach to Content Reading.
CS: North Dakota Univ., Grand Forks. Center for Teaching and Learning.
PY: 1988
JN: Insights; v20 n7 Apr 1988
AV: INSIGHTS, Center for Teaching and Learning, Box 8158, University of North Dakota, Grand Forks, ND 58202 ($3.50 per subscription).
NT: 11 p.
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Cloze-Procedure; Elementary-Secondary-Education; Junior-High-Schools; Middle-Schools; Science-Education; Secondary-School-Science
DE: *Content-Area-Reading; *Elementary-School-Science; *Reading-Comprehension; *Reading-Improvement; *Reading-Skills; *Reading-Strategies
AB: Children who have difficulty reading content materials are sometimes found to read fiction quite well. These children may not have the conceptual knowledge they need to relate the text material to their own lives. Children may experience difficulty reading content texts because they do not actively try to relate to and build knowledge from one situation to the next. Because of the shallow presentation and disorganization of content in some texts, children are required to make inferences and contribute all the meaning. This themed approach helps address these concerns in that it builds the

learner's background for the print by giving real experiences which capture the child's interest in learning, facilitates independence in learning and active involvement, and provides well written texts. This approach also uses a variety of materials and activities to develop skills, strategies, and interest in reading. These include charts, poems, recipes, and games. An example of such an approach is included. Strategies and activities demonstrated are: (1) a cloze activity; (2) charting questions; (3) reading strategies; (4) non-print resources; (5) semantic webbing; and (6) a recipe. All involving a unit on bats as an example. Activities stress that readers need to use the semantic, syntactic, and graphophonic cueing systems in a balanced and effective way. Risk taking, like effective use of strategies, is modeled, guided, and reinforced whenever possible. (CW)

AN: EJ321789
AU: Byrd,-Diana-M.; Gholson,-Barry
TI: Reading, Memory, and Metacognition.
PY: 1985
JN: Journal-of-Educational-Psychology; v77 n4 p428-36 Aug 1985
AV: UMI
DE: Cognitive-Development; Comparative-Analysis; Elementary-Education; Grade-2; Grade-4; Multivariate-Analysis; Reading-Research; Reading-Strategies
DE: *Memory-; *Metacognition-; *Reading-Ability; *Reading-Skills
AB: This study was designed to explore relations among reading skills, metareading, memory, and metamemory. Interactions among these skills were investigated as related to reading ability, operativity, and grade level. The effects of experience, operativity, and metacognition on reading and memory skills were discussed. (Author/DWH)

AN: ED292070
AU: Dermody,-Margaret
TI: Metacognitive Strategies for Development of Reading Comprehension for Younger Children.
PY: 1988
NT: 11 p.; Paper presented at the Annual Meeting of the American Association of Colleges for Teacher Education (New Orleans, LA, February 17-20, 1988).
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Cognitive-Processes; Grade-4; Intermediate-Grades; Reading-Instruction; Reading-Research
DE: *Metacognition-; *Reading-Comprehension; *Reading-Improvement; *Reading-Strategies
AB: A study investigated the development of metacognitive strategy instruction on standardized reading comprehension measures with fourth grade students. Forty-one subjects were assigned to one of three criterion reading groups, based on pretest scores using the Stanford Diagnostic Reading Test (SDRT) and the Wide Range Achievement Test: (1) "GOOD/GOOD" (students with above average reading comprehension and above average word recognition), (2) "GOOD/POOR" (students with below

average reading comprehension but above average word recognition), and (3) "POOR/POOR" (students with below average reading comprehension and word recognition). The subjects were involved in three phases of instruction using the direct teaching method: (1) students were first taught individual strategies of prediction, clarification, question generating, and summarizing; (2) the researcher then used the direct teaching model with the reciprocal teaching methodology; and (3) finally, reciprocal teaching methods were applied within the content area of social studies. Results indicated that for the "GOOD/POOR" group, metacognitive strategy training with reciprocal teaching significantly influenced reading comprehension, suggesting that for this type of reader direct instruction of needed strategies can improve reading comprehension. (Twenty-three references are appended.) (MM)

AN: EJ294665
AU: Escoe,-Adrienne-S.
TI: To Learn to Read between the Lines, Students Have to Be Taught "How" to Read between the Lines.
PY: 1984
JN: Reading-World; v23 n3 p226-33 Mar 1984
AV: UMI
DE: Cognitive-Processes; Intermediate-Grades; Questioning-Techniques
DE: *Reading-Comprehension; *Reading-Instruction; *Reading-Material-Selection; *Reading-Strategies; *Teacher-Role
AB: Notes that intermediate grade students who still have difficulty understanding implied messages in print have a limited time for learning the skill. Suggests that the traditional teaching method of questioning about a passage is ineffective, and proposes a direct instruction method for use in a variety of situations. Recommends materials that facilitate learning aid provide practical diagnostic information. (FL)

AN: EJ280948
AU: Fearn,-Leif
TI: What Makes People Understand Things?
PY: 1983
JN: G/C/T; n27 p42-43 Mar-Apr 1983
AV: Reprint: UMI
DE: *Attention-; *Cognitive-Processes; *Concept-Formation; *Elementary-Secondary-Education
AB: In order to bridge the gap between knowing something and applying it, students must truly understand the concept. Elements of understanding include attention, consideration of meanings, and conceptualization. (CL)

AN: EJ316581
AU: Geoffrion,-Leo-D.; Geoffrion,-Olga-P.
TI: Comprehension.

PY: 1985
JN: Computers,-Reading-and-Language-Arts; v2 n2 p18-24 Win 1984-85
AV: UMI
DE: Computer-Software; Elementary-Education
DE: *Cognitive-Style; *Computer-Assisted-Instruction; *Reading-Comprehension; *Reading-Instruction; *Schemata-Cognition; *Vocabulary-Development
AB: Describes how reading instruction in comprehension will be much like instruction in thinking and problem solving due to the capacity of computers to store data and retrieve literal information instantly. (CRH)

AN: EJ291297
AU: Guthrie,-John-T.
TI: Research: Teaching Comprehension Monitoring.
PY: 1983
JN: Journal-of-Reading; v27 n2 p190-91 Nov 1983
AV: UMI
DE: Metacognition-; Reading-Diagnosis; Secondary-Education
DE: *Cognitive-Processes; *Reading-Comprehension; *Reading-Instruction; *Reading-Research
AB: Concludes that (1) knowing whether we comprehend as we read is indispensible to the process of understanding itself; and (2) without self-monitoring, there can be little textbook learning and even less hope for informed participation in democracy. (FL)

AN: EJ301249
AU: Hahn,-Amos-L.
TI: Assessing and Extending Comprehension: Monitoring Strategies in the Classroom.
PY: 1984
JN: Reading-Horizons; v24 n4 p231-37 Sum 1984
AV: UMI
DE: Elementary-Secondary-Education; Questioning-Techniques; Teaching-Methods
DE: *Cognitive-Processes; *Reading-Comprehension; *Reading-Instruction; *Reading-Research; *Reading-Strategies
AB: Discusses research supporting the instructional validity of three comprehension monitoring strategies: (1) summarization of text, (2) self-initiated questioning, and (3) differentiation of reader-based and text-based questions. (FL)

AN: ED263538
AU: Harris,-Theodore-L., Ed.; Cooper,-Eric-J., Ed.
TI: Reading, Thinking, and Concept Development: Strategies for the Classroom.
CS: College Entrance Examination Board, New York, N.Y.
PY: 1985
AV: College Board Publications, Box 886, New York, NY 10101 ($19.95).

NT: 284 p.
PR: EDRS Price - MF01 Plus Postage. PC Not Available from EDRS.
DE: Advance-Organizers; Cognitive-Processes; Content-Area-Reading; Elementary-Secondary-Education; Prediction-; Readability-Formulas; Reading-Material-Selection; Reading-Research; Teaching-Methods; Textbook-Evaluation; Writing-Skills
DE: *Concept-Formation; *Reader-Text-Relationship; *Reading-Comprehension; *Reading-Instruction; *Reading-Processes; *Reading-Strategies
AB: Intended to help teachers both improve students' text comprehension and better understand the teaching-learning process involved, this book focuses on comprehension and concept development as the central core of an effective educational program. The book's five sections deal with teaching explicit comprehension skills, precomprehension and postcomprehension strategies, interactive comprehension strategies, integrative comprehension strategies, and readability and the future of the textbook. The titles of the 15 essays and their authors are as follows: (1) "'Teaching' Comprehension," by P. David Pearson and Margie Leys; (2) "How to Teach Readers to Find the Main Idea," by Joanna P. Williams; (3) "Developing Comprehension of Anaphoric Relationships," by Dale D. Johnson; (4) "Knowledge and Comprehension: Helping Students Use What They Know," by Judith A. Langer and Victoria Purcell-Gates; (5) "The Advance Organizer: Its Nature and Use," by Robert W. Jerrolds; (6) "Anticipation and Prediction in Reading Comprehension," by Joan Nelson-Herber; (7) "Response Instruction," by Beau Fly Jones; (8) "Using Classroom Dialogues and Guided Practice to Teach Comprehension Strategies," by Scott G. Paris; (9) "Reciprocal Teaching: Activities to Promote Reading with Your Mind," by Annemarie Sullivan Palincsar and Ann L. Brown; (10) "Using Children's Concept of Story to Improve Reading and Writing," by Dorothy S. Strickland and Joan T. Feeley; (11) "Integration of Content and Skills Instruction," by Olive S. Niles; (12) "Levels of Comprehension: An Instructional Strategy for Guiding Students' Reading," by Harold L. Herber; (13) "Thinking About Reading," by Susan Sardy; (14) "Matching Reading Materials to Readers: The Role of Readability Estimates in Conjunction with Other Information about Comprehensibility," by George Klare; and (15) "Textbook Adoptions: A Process for Change," by Jean Osborn and Marcy Stein. (HTH)

AN: EJ321409
AU: Johnston,-Peter
TI: Teaching Students to Apply Strategies that Improve Reading Comprehension.
PY: 1985
JN: Elementary-School-Journal; v85 n5 p635-45 Jun 1985
AV: UMI
DE: Attribution-Theory; Directed-Reading-Activity
DE: *Comprehension-; *Reading-Comprehension; *Reading-Improvement; *Reading-Instruction; *Reading-Strategies; *Teaching-Methods
AB: Argues that the directed reading activity (DRA) is a teaching

strategy of limited use to students and discusses how teachers can transform the teaching strategy into a learning strategy. Discusses the generalization of the DRA strategy, emphasizes self-checking for learner control of strategies, and describes attributional consequences of teaching and learning strategies. (DT)

AN: EJ302654
AU: Langer,-Judith-A.
TI: Examining Background Knowledge and Text Comprehension.
PY: 1984
JN: Reading-Research-Quarterly; v19 n4 p468-81 Sum 1984
AV: UMI
DE: Directed-Reading-Activity; Discussion-Teaching-Technique; Grade-6; Intermediate-Grades; Knowledge-Level DE: *Measurement-Techniques; *Prior-Learning; *Reading-Comprehension; *Reading-Research; *Schemata-Cognition
AB: Using sixth-grade students, a study examines (1) relationships between background knowledge and passage comprehension, (2) relative usefulness of certain variations in measuring available knowledge, (3) value of a background measure as applied to a teacher-directed small group prereading language and concept organizer activity, and (4) effect of a prereading activity on text-specific background knowledge and on comprehension. (HOD)

AN: EJ294729
AU: Mier,-Margaret
TI: ERIC/RCS: Comprehension Monitoring in the Elementary Classroom.
PY: 1984
JN: Reading-Teacher; v37 n8 p770-74 Apr 1984
AV: UMI
DE: Cognitive-Processes; Elementary-Education; Teaching-Methods
DE: *Metacognition-; *Reading-Comprehension; *Reading-Instruction; *Teacher-Role
AB: Reviews recent ERIC materials on comprehension monitoring. (FL)

AN: EJ289448
AU: Moore,-Phillip-J.
TI: Aspects of Metacognitive Knowledge about Reading.
PY: 1983
JN: Journal-of-Research-in-Reading; v6 n2 p87-102 Sep 1983
AV: UMI
DE: Academic-Aptitude; Cognitive-Processes; Developmental-Stages; Elementary-Education; Reading-Comprehension; Reading-Instruction
DE: *Child-Development; *Cognitive-Development; *Metacognition-; *Questioning-Techniques; *Reading-Processes; *Reading-Research
AB: Investigates the development of children's metacognitive knowledge about reading, its relationship to reading performance, and the influence of using two different interviewing techniques for eliciting information about reading. (FL)

AN: EJ367246
AU: Moore,-Phillip-J.
TI: Reciprocal Teaching and Reading Comprehension: A Review.
PY: 1988
JN: Journal-of-Research-in-Reading; v11 n1 p3-14 Feb 1988
AV: UMI
DE: Feedback-; Learning-Disabilities; Peer-Teaching; Questioning-Techniques; Reading-Research; Teaching-Methods
DE: *Reading-Comprehension; *Reading-Strategies
AB: Suggests that reciprocal teaching (interaction of novices and experts in explicit, overt demonstrations of strategy use) is a successful way of increasing comprehension scores of students. Outlines the theoretical underpinnings of reciprocal teaching and reviews research examining its effects on comprehension disabled subjects. (MM)

AN: EJ316610
AU: Morrow,-Lesley-Mandel
TI: Reading and Retelling Stories: Strategies for Emergent Readers.
PY: 1985
JN: Reading-Teacher; v38 n9 p870-75 May 1985
AV: UMI
DE: Oral-Language; Oral-Reading; Primary-Education
DE: *Reading-Comprehension; *Reading-Instruction; *Reading-Research; *Reading-Skills; *Reading-Strategies; *Story-Telling
AB: Shows how retelling stories appears to be a strategy to improve comprehension, concept of story and oral language. (EL)

AN: EJ314721
AU: Nickerson,-Raymond-S.
TI: Understanding Understanding.
PY: 1985
JN: American-Journal-of-Education; v93 n2 p201-39 Feb 1985
AV: UMI
DE: Cognitive-Processes; Concept-Formation; Definitions-; High-Schools; High-School-Students; Mathematical-Concepts; Scientific-Concepts
DE: *Comprehension-; *Fundamental-Concepts
AB: Several experimental studies are reviewed, the results of which suggest that students often fail to acquire an understanding of some of the concepts, relationships, principles, and processes that are fundamental to traditional high school course material. Questions of what it means to understand something and of how to assess understanding are considered. (Author)

AN: ED286149
AU: O'Hara,-Nancy-Jane

TI: An Investigation of the Effects of Guided Imagery, before Reading, on Comprehension of Stories in a Narrative Text.
PY: 1987
NT: 98 p.; M.S. Thesis, Eastern Montana College. Partial funding for research provided by a grant from Eastern Montana College.
PR: EDRS Price - MF01/PC04 Plus Postage.
DE: Grade-3; Primary-Education; Reader-Text-Relationship; Reading-Research
DE: *Reading-Comprehension; *Reading-Instruction; *Reading-Processes; *Reading-Strategies; *Schemata-Cognition
AB: A study investigated the effects on reading comprehension of guided imagery instruction before reading. Subjects, 25 third-grade student volunteers from a small Montana community, were given a vocabulary pretest to determine the effect of background knowledge. They were then randomly assigned to one of three treatment groups--read only, guided imagery, or non-related imagery--for three sessions. After reading the narrative text, the students completed a main idea statement and answered comprehension questions. Results indicated no significant differences among the three treatment groups. Results also indicated that the order of treatment made no apparent difference in the literal and interpretive level test scores. In addition, there appeared to be no difference in the type of treatment related to the distribution of main idea types. (Statistical tables and a figure are included; a data table, the vocabulary pretest, the guided imagery procedure and treatments, the posttest, and extensive references are appended.) (NKA)

AN: EJ315109
AU: Otto,-Wayne
TI: Metacognition and Reading Instruction.
PY: 1985
JN: Journal-of-Reading; v28 n6 p573-75 Mar 1985
AV: UMI
DE: Cognitive-Development; Reading-Research
DE: *Definitions-; *Metacognition-; *Reading-Comprehension; *Reading-Instruction; *Schemata-Cognition
AB: Argues that metacognitive development should remain--or become--an aspect of instruction that aims to enhance students' reading comprehension. (HOD)

AN: ED288178
AU: Pahl,-Michele-M.
TI: The Role of Story Schema in Comprehension: A Teacher's Perspective of the Research and Educational Implications.
PY: 1987
NT: 47 p.
PR: EDRS Price - MF01/PC02 Plus Postage.
DE: Cognitive-Processes; Comparative-Analysis; Elementary-Education; Listening-Skills; Models-; Reader-Text-Relationship; Reading-Ability; Reading-Processes; Reading-Writing-Relationship; Recall-Psychology

DE: *Reading-Comprehension; *Reading-Instruction; *Reading-Research; *Schemata-Cognition; *Story-Grammar; *Writing-Instruction
AB: Proceeding from a definition of "story schema" as an idealized internal representation of the parts of a typical story and the relationships among those parts, this paper explores the role of story schemata in reading comprehension. The paper also identifies variables that may affect the way in which schemata function and outlines the instructional implications of story schemata theory. Following an introduction, the paper examines several story grammar models (story grammar refers to the structure of the text being comprehended) that have been used consistently in research, focusing on and comparing those designed by J. M. Mandler and N. S. Johnson (1977) and N. L. Stein and C. G. Glenn (1979). Next, the paper treats the role of story schema in comprehension, pointing out that story schemata appear to play a primary role in reading and listening comprehension. Continuing a review of the literature, the paper examines the variables, such as developmental factors, reading ability, and input/output modality, that affect the operation of story schemata. The paper then considers the instructional implications for reading comprehension and writing of story grammar research. The paper concludes with a research summary and recommendations for making that research applicable to classroom practice. (References, tables of data, and figures are appended.) (NKA)

AN: ED257034
AU: Palincsar,-Annemarie-Sullivan
TI: The Unpacking of a Multi-Component, Metacognitive Training Package.
PY: 1985
NT: 18 p.; Paper presented at the Annual Meeting of the American Educational Research Association (69th, Chicago, IL, March 31-April 4, 1985).
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Cognitive-Processes; Junior-High-Schools; Learning-Processes; Reading-Processes; Reading-Skills
DE: *Metacognition-; *Reading-Comprehension; *Reading-Instruction; *Reading-Research; *Reading-Strategies; *Remedial-Reading
AB: The ninth in a series of studies to improve the strategies that poor reading comprehenders use to study text began as a training study containing three components: strategies to be taught, instructional mode by which they would be taught, and the metacognitive environment for the instruction. After identifying four strategies that merited investigation, the instructional mode (reciprocal teaching) was selected. The metacognitive environment in which the instruction was instituted was then analyzed, and the basic instructional package was investigated in a series of five studies in which the teacher was either the investigator, a volunteer reading teacher, a recruited reading teacher, or a peer tutor. The setting was a resource room or classroom; the content was either selected expository passages from basal texts or science material; and the students were seventh graders having difficulty in comprehending. Results showed that dialogue and

comprehension improved substantially over time. This work suggests that an effective reading instruction program requires the identification of complementary strategies that are modeled by an expert and acquired by the learner in a context reinforcing the usefulness of such strategies. (DF)

AN: EJ312477
AU: Paris,-Scott-G.; Jacobs,-Janis-E.
TI: The Benefits of Informed Instruction for Children's Reading Awareness and Comprehension Skills.
PY: 1984
JN: Child-Development; v55 n6 p2083-93 Dec 1984
AV: UMI
DE: Children-; Elementary-Education; Grade-3; Grade-5; Interviews-; Reading-Skills
DE: *Classroom-Techniques; *Elementary-School-Students; *Metacognition-; *Reading-Comprehension; *Reading-Strategies
AB: Examines reading awareness and comprehension skills to discover the developmental and instructional relationships between metacognition and performance. Half of the third- and fifth-grade subjects received four months of classroom instruction on reading strategies. Results of pre- and posttests and interviews revealed that the instruction increased reading awareness and comprehension. (Author/CB)

AN: ED294152
AU: Pearson,-P.-David; Dole,-Janice-A.
TI: Explicit Comprehension Instruction: A Review of Research and a New Conceptualization of Instruction. Technical Report No. 427.
CS: Bolt, Beranek and Newman, Inc., Cambridge, Mass.; Illinois Univ., Urbana. Center for the Study of Reading.
PY: 1988
NT: 21 p.
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Basal-Reading; Cognitive-Processes; Critical-Reading; Instructional-Effectiveness; Problem-Solving; Reader-Text-Relationship; Reading-Processes; Reading-Research; Teacher-Student-Relationship
DE: *Reading-Comprehension; *Reading-Instruction; *Reading-Strategies
AB: Reading comprehension can be more effectively taught using new instructional frameworks--such as explicit comprehension instruction--rather than the basal reading model. Traditionally, comprehension has been taught through a process of mentioning the skill that students should apply, practicing the skill in workbooks, and assessing student responses. Explicit comprehension instruction, however, focuses on direct explanations of comprehension strategies, guided practice to understand how the strategy is applied, and the transfer of comprehension strategies to new materials. Studies of these comprehension approaches, including inference training and reciprocal teaching, reveal that reading comprehension can be

explicitly taught. There are several basic elements involved in explicit comprehension instruction: (1) complex strategies are not broken down into separate, sequentially ordered subskills; (2) multiple answers exist for all questions; (3) multiple ways exist to apply a strategy; and (4) feedback is suggestive rather than corrective, in that teachers praise students for applying parts of the strategy appropriately and encourage students to consider alternative ways of approaching a problem. Because guided practice and strategy explanations may be difficult for teachers unfamiliar with the process, explicit comprehension instruction can be implemented gradually, simultaneously decreasing the number of teacher controlled tasks while increasing student responsibility and control. (Two tables outlining the stages of responsibility in inference training and question-answer relationship tasks are included, and one footnote and 50 references are appended.) (MM)

AN: EJ289063
AU: Pearson,-P.-David; Gallagher,-Margaret-C.
TI: The Instruction of Reading Comprehension.
PY: 1983
JN: Contemporary-Educational-Psychology; v8 n3 p317-44 Jul 1983
AV: UMI
DE: Advance-Organizers; Elementary-Secondary-Education; Learning-Strategies; Reading-Research
DE: *Metacognition-; *Reading-Comprehension; *Reading-Instruction
AB: The existing literature on reading comprehension instruction is organized and reviewed. The authors question whether explicit training to improve comprehension or monitoring strategies should be offered, since these behaviors improve with maturity and experience and in the absence of any apparent training, but conclude that it is possible that instruction accelerates such growth. (Author/LC)

AN: ED247530
AU: Pearson,-P.-David; Tierney,-Robert-J.
TI: On Becoming a Thoughtful Reader: Learning to Read like a Writer. Reading Education Report No. 50.
CS: Bolt, Beranek and Newman, Inc., Cambridge, Mass.; Illinois Univ., Urbana. Center for the Study of Reading.
PY: 1984
NT: 52 p.
PR: EDRS Price - MF01/PC03 Plus Postage.
DE: Reading-Habits; Secondary-Education
DE: *Language-Processing; *Reading-Comprehension; *Reading-Improvement; *Reading-Research; *Reading-Strategies; *Writing-Processes
AB: Addressing the question of how schools and teachers can foster an advanced level of reading awareness among secondary students, this paper focuses on the similarity in language used to describe recent research on both the composing process and comprehension as acts of constructing meaning. It presents a perspective on the reading/writing

relationship, and argues that the thoughtful reader is one who reads as if composing a text for yet another reader who lives within. The paper states that every speech act is an action, and that every speaker and every listener is trying to get the other one in the discourse to behave in a certain way. It is noted that this perspective implies that knowing why a speaker said something is just as important as knowing what was said, and that this--in conjunction with readers monitoring their own comprehension--indicates that reading should be viewed as an act of composing. In this composing model of reading, the paper argues, there are key authorial roles a thoughtful reader must play: planner, composer, editor, and monitor. It also describes strategies teachers can use in the classroom to promote thoughtfulness to self (a role that encourages students to become better at drawing essential inferences from texts), thoughtfulness to an author, the suspending of judgment, and critical reading. (CRH)

AN: EJ353763
AU: Pinto,-Abuendia-Padilha
TI: Developing a Flexible Capacity for Approaching a Text.
PY: 1986
JN: ESPecialist; n15 p41-59 Dec 1986
AV: UMI
DE: Cognitive-Processes; Reading-Habits; Reading-Processes; Second-Language-Instruction; Skill-Development
DE: *English-Second-Language; *Reading-Comprehension; *Reading-Improvement; *Reading-Instruction; *Reading-Strategies
AB: Focuses on the underlying elements in the reading comprehension process that better distinguish its developmental phases. Offers suggestions for the acquisition of strategies pertaining to textual organization that, together with proposed activities for comprehension, contribute to the formation and consolidation of reading habits. Includes practical exercises for reading improvement in English as a Second Language. (NKA)

AN: ED284180
AU: Preul,-Karen; Dewitz,-Peter
TI: The Effectiveness of a Self-Monitoring Strategy for Teaching Main Idea Comprehension.
PY: 1986
NT: 21 p.; Paper presented at the Annual Meeting of the National Reading Conference (36th, Austin, TX, December 2-6, 1986).
PR: EDRS Price - MF01/PC01 Plus Postage. DE: Grade-5; Intermediate-Grades; Reading-Improvement; Reading-Research
DE: *Reading-Comprehension; *Reading-Instruction; *Reading-Strategies; *Teaching-Methods
AB: A study compared the relative effectiveness of a direct instruction method for finding the main idea in a text with a method that combined direct instruction with a checklist that encouraged the students to monitor their application of the main idea strategy.

Subjects, 56 fifth-graders at a suburban elementary school, were divided into one of three special reading groups: a self-monitoring strategy group (direct instruction plus self-monitoring checklist), an alternate strategy group (direct instruction without the checklist), and a control group. Instructional materials for the two strategy groups consisted of passages with either explicit or implicit main ideas selected from two skill development series, while those for the control group were taken from basal readers. Instruction took place over a four-week period, with 33 of the students being interviewed after 11 days. Students completed pretests and posttests using material from the same sources as well as from a text not covered in class. Test results indicated that the self-monitoring group performed significantly better than the alternate strategy group and the control group. Interview results suggested that the students in the two experimental groups had a clearer idea about what they learned than did the control students. The study results suggest that students can be trained to improve their comprehension of main idea using a strategy that combines direct instruction with a self-monitoring checklist. (HTH)

AN: ED283141
AU: Reed,-Keflyn-Xavier
TI: Using Directed Reading Activities to Increase Students' Receptiveness and Comprehension of Literary Forms.
PY: 1987
NT: 10 p.; Paper presented at the Annual Meeting of the Southeastern Conference on English in the Two-Year College (22nd, Jackson, MS, February 19-21, 1987).
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Reading-Difficulties; Reading-Improvement; Reading-Processes; Remedial-Reading; Supplementary-Reading-Materials; Textbook-Content; Two-Year-Colleges
DE: *Directed-Reading-Activity; *Literature-Appreciation; *Reading-Assignments; *Reading-Comprehension; *Reading-Strategies
AB: After an informal study of 589 college freshmen enrolled in reading courses at Bishop State Junior College (Alabama) revealed that most students read out-of-class assignments only sometimes because of the degree of difficulty of the reading tasks, a series of directed and structured activities was developed to promote reading comprehension. The basic concept underlying the planned activities is that students can experience success in reading by following an analytical process for studying textbooks, poems, short stories, and novels. In the textbook chapter analysis exercises, the emphasis is on helping the student see how textbook chapters are arranged, and the detailed worksheet helps the student grasp the idea of structure. The objective of the poetry analysis assignment is to enable the student to understand that poetry has two levels: literal and figurative, while the purpose of the short story assignment is to assist the student in identifying the elements common to the short story. The novel analysis exercise helps the student identify the common structure and content of the novel, by reducing key elements to simple

words and phrases--filtering out the trivial details to develop a full understanding of the novel. After using these analysis exercises for one-quarter of the school year, 511 students responded to an assessment item. Of the 511, 427 students indicated these directed activities were helpful for reading comprehension. (Sample worksheets are attached.) (NKA)

AN: EJ309802
AU: Reutzel,-D.-Ray
TI: Story Maps Improve Comprehension.
PY: 1985
JN: Reading-Teacher; v38 n4 p400-04 Jan 1985
AV: UMI
DE: Elementary-Education; Reading-Processes; Semantics-; Teaching-Methods
DE: *Reading-Comprehension; *Reading-Instruction; *Reading-Research; *Reading-Strategies
AB: Suggests that integrating story maps into a reading lesson helps readers attend to details as well as to relationships between story elements before, during, and after reading. Reports findings of a study to support this belief. (FL)

AN: EJ293077
AU: Richgels,-Donald-J.; Hansen,-Ruth
TI: Gloss: Helping Students Apply Both Skills and Strategies in Reading Content Texts.
PY: 1984
JN: Journal-of-Reading; v27 n4 p312-17 Jan 1984
AV: UMI
DE: Content-Area-Reading; Schemata-Cognition; Secondary-Education; Teaching-Methods
DE: *Reading-Comprehension; *Reading-Instruction; *Reading-Skills; *Reading-Strategies
AB: Gives teachers guidelines for preparing gloss notations focused to help readers develop specific reading skills and strategies. (AEA)

AN: EJ313672
AU: Sanacore,-Joseph
TI: Six Reading Comprehension Myths.
PY: 1985
JN: Educational-Leadership; v42 n5 p43-47 Feb 1985
AV: UMI
DE: Elementary-Secondary-Education; Learning-Strategies
DE: *Educational-Principles; *Reading-Comprehension; *Reading-Strategies
AB: Six mistaken beliefs about reading comprehension are detailed, their manifestations illustrated, and preventative/corrective strategies recommended in this article. A list of 22 references is provided. (DCS)

AN: EJ296742
AU: Sanacore,-Joseph
TI: Metacognition and the Improvement of Reading: Some Important Links.
PY: 1984
JN: Journal-of-Reading; v27 n8 p706-12 May 1984
AV: UMI
DE: Educational-Theories; Reading-Research; Secondary-Education; Teaching-Methods
DE: *Cognitive-Processes; *Metacognition-; *Reading-Comprehension; *Reading-Improvement; *Reading-Instruction; *Schemata-Cognition
AB: Reviews some theory and research related to metacognition and reading as well as classroom strategies such as generating good comprehension questions during reading, monitoring and resolving comprehension blocks, applying study procedures that increase comprehension and retrieval of information, and adhering to an author's text structure. (FL)

AN: ED293111
AU: Sawyer,-Myrtie-L.; And-Others
TI: Reading Comprehension of Sixth Grade, Good and Poor Readers: A Developmental and Methodological Investigation.
PY: 1988
NT: 28 p.; Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 5-9, 1988).
PR: EDRS Price - MF01/PC02 Plus Postage.
DE: Analysis-of-Variance; Grade-6; Intermediate-Grades; Metacognition-; Reader-Response; Reader-Text-Relationship; Reading-Difficulties; Reading-Research; Reading-Skills; Recall-Psychology
DE: *Cognitive-Processes; *Reading-Comprehension; *Reading-Processes; *Reading-Strategies
AB: To understand better how readers learn and recall text information, a study examined one prose learning approach--the selective attention strategy (SAS)--in which text elements are processed, given various degrees of attention, and learned according to their perceived importance. Fifty sixth grade students from an inner city school in a large western city were classified as "good" readers--those scoring above the 80th percentile on the Stanford Achievement Test (SAT)--and "poor" readers, who scored below the 40th percentile. Subjects were divided into three groups: subjects in Group 1 were told to remember the color of the items mentioned in the text; Group 2 subjects were told to remember food and drinks; and Group 3 subjects were told to remember the main ideas of the text. The text was shown in segments of two or three sentences on Apple II+ computer monitors. Probes were sounded at intervals throughout the text; when a probe sounded, subjects were told to immediately press the space bar. After completing the passage each student was given a short answer posttest, and was interviewed using the "Awareness Strategies

Interview." Results indicated that although both good and poor readers could successfully employ the SAS, good readers learned more information from a text in general and were more competent at the type of selective learning implied by the SAS. Causal analyses, however, reveal that only the good readers showed any indication of using the SAS in a causal fashion. (Four tables are included and 24 references are appended.) (MM)

AN: EJ302848
AU: Scruggs,-Thomas-E.; Mastropieri,-Margo-A.
TI: How Gifted Students Learn: Implications from Recent Research.
PY: 1984
JN: Roeper-Review; v6 n4 p183-85 Apr 1984
AV: UMI
DE: Concept-Formation; Elementary-Secondary-Education; Mnemonics-
DE: *Gifted-; *Learning-Processes; *Memory-; *Spatial-Ability;
*Teaching-Methods
AB: A review of recent studies indicates that gifted learners spontaneously produce more effective learning strategies than comparison groups and benefit from the use of more complex, externally provided strategies. Implications include the use of slower presentation rates for new information, spatial organization of prose content, and teacher-provided mnemonic strategies. (Author)

AN: ED270741
AU: Sertny,-Michael-Lee; Dean,-Raymond-S.
TI: Interspersed Post-Passage Questions and Reading Comprehension Achievement.
PY: 1985
NT: 24 p.; Paper presented at the Annual Meeting of the American Psychological Association (Los Angeles, CA, August 23-27, 1985).
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Grade-2; Primary-Education; Reading-Programs
DE: *Questioning-Techniques; *Reading-Comprehension;
*Reading-Instruction; *Reading-Research; *Reading-Strategies
AB: A study investigated the differences in comprehension among 54 second grade students of differing reading abilities who either did nor did not receive basal reading instruction with interspersed postquestions, using the same reading series. Two factors, entering reading level and use of interspersed postquestions, were combined factorially to form six experimental groups. The dependent variable was the children's score on the comprehension subtest of the SRA Achievement Series. Results showed that while questioning instruction had little effect on the above average reader, both average and below average readers made significant gains in comprehension when instructed in the use of postpassage questions. Students, therefore, must develop a strategy for dealing with textual material and so must be provided with experience in using a questioning strategy. This approach may begin to help students internalize a strategy that will offer them the skills necessary for independent reading. (Tables

provide a common lesson format for teaching and for means and standard deviations on the SRA criterion measure, while a figure illustrates interaction of dependent measure by reading ability groups.) (SRT)

AN: EJ321790
AU: Slife,-Brent-D.; And-Others
TI: Separability of Metacognition and Cognition: Problem Solving in Learning Disabled and Regular Students.
PY: 1985
JN: Journal-of-Educational-Psychology; v77 n4 p437-45 Aug 1985
AV: UMI
DE: Comparative-Analysis; Educational-Research; Elementary-Education; Elementary-School-Mathematics; Learning-Disabilities; Mathematics-Achievement; Validity-
DE: *Cognitive-Processes; *Metacognition-; *Problem-Solving
AB: A test of whether metacognition is a separate factor from cognition was conducted by measuring the effects of metacognitive factors in problem solving, while attempting to hold relevant cognitive factors constant. Learning disabled subjects were less skilled in metacognition with respect to knowledge about cognition and regulation of cognition. (Author/DWH)

AN: EJ289470
AU: Stewart,-Oran; Tei,-Ebo
TI: Some Implications of Metacognition for Reading Instruction.
PY: 1983
JN: Journal-of-Reading; v27 n1 p36-43 Oct 1983
AV: UMI
DE: Cognitive-Processes; Reading-Comprehension; Secondary-Education; Teaching-Methods
DE: *Metacognition-; *Reading-Instruction; *Reading-Research; *Reading-Skills
AB: Reviews the research on the relationship of metacognition to fluent reading and offers techniques for developing knowledge of and fluency in reading. (AEA)

AN: EJ356237
AU: Tierney,-Robert-J.; And-Others
TI: Reading Strategies and Practices.
PY: 1987
JN: Teacher-Education-and-Practice; v3 n2 p37-89 Fall-Win 1986-87
DE: Elementary-Secondary-Education; Multisensory-Learning; Word-Recognition
DE: *Reading-Comprehension; *Reading-Difficulties; *Reading-Strategies; *Teaching-Methods
AB: Word identification, multisensory, and comprehension instructional strategies are described for teaching students with reading difficulties. These include the analytic method, synthetic word families, syllabaries, Goodman's Reading Strategy Lessons, Fernald

Technique, Cooper Method, Modality Blocking Procedure, Gillingham-Stillman Method, Hegge-Kirk-Kirk Method, Monroe Method, graphic organizers, Herringbone Technique, Stauffer's Language-Experience Approach, possible sentences, list-group-label, and directed reading-thinking activity. (CB)

AN: ED281140
AU: Tierney,-Robert-J.; Pearson,-P.-David
TI: Schema Theory and Implications for Teaching Reading: A Conversation. Reading Education Report No. 67.
CS: Bolt, Beranek and Newman, Inc., Cambridge, Mass.; Illinois Univ., Urbana. Center for the Study of Reading.
PY: 1986
NT: 19 p.
PR: EDRS Price - MF01/PC01 Plus Postage.
DE: Elementary-Education; Opinions-; Prior-Learning; Reading-Processes; Theories-
DE: *Reader-Text-Relationship; *Reading-Comprehension; *Reading-Instruction; *Reading-Research; *Research-Utilization; *Schemata-Cognition
AB: Research discoveries over the past 15 years concerning reading comprehension have had a significant impact on reading instruction, particularly schema theory. This theory, based on prior learning, which states that the reader uses the text to construct a meaning within his or her own mind, affects what teachers can do to help students improve comprehension. A conceptual rather than a definitional or contextual approach should be used to teach vocabulary, because it shows students how particular vocabulary items relate to other concepts they already know. Further, teachers should encourage students' initiative in reading, and encourage them to pause and think while reading. In this way, teachers can help children select schemata for understanding a new selection. Schema theory also affects the ways teachers can help children extend beyond the text and interact with it at more complex levels, by emphasizing the importance of helping students get background knowledge and of respecting the reader's role in creating meaning. (JD)

AN: EJ339929
AU: Whitehead,-David
TI: What Shall We Teach Children to Help Them Comprehend?
PY: 1986
JN: Australian-Journal-of-Reading; v9 n2 p59-69 Jun 1986
DE: Decoding-Reading; Inferences-; Metacognition-; Questioning-Techniques; Secondary-Education
DE: *Reading-Comprehension; *Reading-Instruction; *Reading-Strategies
AB: Explains five strategies for teaching reading comprehension: (1) imaging or visualizing; (2) paraphrasing; (3) questioning and inference; (4) prereading; and (5) metacognitive strategies. (SRT)

AN: EJ308195
AU: Wilinson,-Ian; Bain,-John
TI: Story Comprehension and Recall in Poor Readers: Everyone a Schemer?
PY: 1984
JN: Australian-Journal-of-Reading; v7 n3 p147-57 Aug 1984
DE: Elementary-Education; Knowledge-Level; Reading-Diagnosis; Reading-Instruction; Reading-Readiness
DE: *Reading-Comprehension; *Reading-Difficulties; *Reading-Strategies; *Schemata-Cognition; *Teaching-Methods
AB: Reviews a study designed to determine whether some of the problems of poor readers are related to inadequately developed story schemata or the inability to use schemata. Discusses the need for teaching strategies to enhance children's knowledge of story structure. (RBW)

AN: ED243093
AU: Wingenbach,-Nancy-Gard
TI: The Gifted Reader: Metacognition and Comprehension Strategies.
PY: 1984
NT: 29 p.; Paper presented at the Annual Meeting of the National Council of Teachers of English Spring Conference (3rd, Columbus, OH, April 12-14, 1984).
PR: EDRS Price - MF01/PC02 Plus Postage.
DE: Elementary-Secondary-Education; Reading-Processes; Reading-Skills
DE: *Academically-Gifted; *Metacognition-; *Reading-Comprehension; *Reading-Research; *Reading-Strategies
AB: To examine the comprehension process employed by gifted readers and to identify the various metacognitive strategies they employ, 100 gifted student volunteers in grades 4 through 7 were administered the Iowa Tests of Basic Skills (ITBS), Reading Subtests 11 and 13. The students also completed a questionnaire to determine metacognitive awareness of strategy selection and use. Based on grade equivalence results of the ITBS subtest, level 13, the top five students in each grade level were selected to participate in protocol analysis of the comprehension process and an interview. Students were given two short passages with related questions from ITBS level 14 and asked to stop at indicated points to describe the text and what they were thinking. Findings revealed that all participants scored above grade level placement, and that students perceived their use of (1) failure to understand a clause, (2) rereading, (3) information about the story to understand context, (4) use of context to obtain meaning of words, (5) identification of main ideas and significant details, and (6) use of imagery, a previously unidentified strategy. The results suggest a need for teacher awareness of the comprehension process and metacognitive strategies. These could be incorporated into both critical and creative reading instruction, along with the general techniques of guided reading and structured overviews. (CRH)

AN: EJ302649

AU: Winograd,-Peter-N.
TI: Strategic Difficulties in Summarizing Texts.
PY: 1984
JN: Reading-Research-Quarterly; v19 n4 p404-25 Sum 1984
AV: UMI
DE: Comparative-Analysis; Difficulty-Level;
Elementary-Secondary-Education; Grade-8
DE: *Reading-Ability; *Reading-Comprehension; *Reading-Difficulties;
*Reading-Research; *Reading-Strategies
AB: Using eighth-grade subjects, a study examined the strategy
differences between good and poor readers as they summarized what they
had read. (HOD)

GETTING COPIES OF THE ITEMS DESCRIBED IN THE ERIC DATABASE:

The items described in the ERIC database have either an "ED" or an "EJ" number in the first field. **About 98% of the ED items can be found in the ERIC Microfiche Collection.** The ERIC Document Reproduction Service (EDRS) in Alexandria, Virginia can produce either microfiche or paper copies of these documents for you. Check the accompanying list of **ERIC Price Codes** for their current prices.

Alternatively, you may prefer to consult the ERIC Microfiche Collection yourself before choosing documents to copy. Over 600 libraries in the United States subscribe to this collection. To find out which libraries near you have it, you are welcome to call the ERIC Clearinghouse on Reading and Communication Skills at (812) 855-5847. Most such libraries have equipment on site for inexpensive production of paper copies from the fiche.

For those few ED-numbered items not found in the Microfiche Collection, check the availability (AV) field of the citation to get information about the author, publisher, or other distributor.

Items with an EJ number in the first field of the citation are journal articles. Due to copyright restrictions, ERIC cannot provide copies of these articles. Most large college or university libraries subscribe to the journals in which these articles were published, and the general public can read or copy the articles from their collections. Should you want copies of articles which appeared in journals not owned by your nearest university library, arrangements usually can be made via interlibrary loan; there frequently is a nominal charge for this, which is set by the lending library. If you are a faculty member, staff member, or student at the university, just ask at your library's reference desk.

For all other categories of users, most universities cannot provide interlibrary services. However, public libraries---which are there to serve all area residents---typically are hooked into statewide lending networks designed to ensure that all state residents have access to materials of interest. Ask your local public librarian about interlibrary loan policies, charges, etc.

There are also two professional reprint services which have obtained permission from some journals to sell article copies. These are University Microfilms International (Article Clearinghouse, 300 North Zeeb Road, Ann Arbor, Michigan 48106---(800) 732-0616), and the Institute for Scientific Information (Original Article Tear Sheet Service, 3501 Market Street, Philadelphia, Pennsylvania 19104---(800) 523-1850). At the time of this publication, UMI charged $10.75 per article regardless of length, and ISI charged $9.50 for the first ten pages, plus $2.00 for each additional ten pages or fraction thereof. However, please check with them for current prices before ordering.

ERIC Price Codes

PAPER COPY /HARD COPY

PRICE CODE	PAGINATION	PRICE
PC 01	1- 25	$ 2.03
PC 02	26- 50	4.06
PC 03	51- 75	6.09
PC 04	76- 100	8.12
PC 05	101- 125	10.15
PC 06	126- 150	12.18
PC 07	151- 175	14.21
PC 08	176- 200	16.24
PC 09	201- 225	18.27
PC 10	226- 250	20.30
PC 11	251- 275	22.33
PC 12	276- 300	24.36
PC 13	301- 325	26.39
PC 14	326- 350	28.42
PC 15	351- 375	30.45
PC 16	376- 400	32.48
PC 17	401- 425	34.51
PC 18	426- 450	36.54
PC 19	451- 475	38.57
PC 20	476- 500	40.60
PC 21	501- 525	42.63
PC 22	526- 550	44.66
PC 23	551- 575	46.69
PC 24	576- 600	48.72
PC 25	601- 625	50.75
PC 26	626- 650	52.78
PC 27	651- 675	54.81
PC 28	676- 700	56.84
PC 29	701- 725	58.87
PC 30	726- 750	60.90
PC 31	751- 775	62.93
PC 32	776- 800	64.96
PC 33	801- 825	66.99
PC 34	826- 850	69.02
PC 35	851- 875	71.05
PC 36	876- 900	73.08
PC 37	901- 925	75.11
PC 38	926- 950	77.14
PC 39	951- 975	79.17
PC 40	976-1,000	81.20

ADD 2.03 FOR EACH ADDITIONAL 25 PAGES,
OR FRACTION THEREOF

MICROFICHE

PRICE CODE	PAGINATION	NO. OF FICHE	PRICE
MF 01	1- 480	1-5	$ .86
MF 02	481- 576	6	1.03
MF 03	577- 672	7	1.20
MF 04	673- 768	8	1.37
MF 05	769- 864	9	1.54
MF 06	865- 960	10	1.71
MF 07	961-1,056	11	1.88
MF 08	1,057-1,152	12	2.05
MF 09	1,153-1,248	13	2.22
MF 10	1,249-1,344	14	2.39
MF 11	1,345-1,440	15	2.56
MF 12	1,441-1,536	16	2.73
MF 13	1,537-1,632	17	2.90
MF 14	1,633-1,728	18	3.07
MF 15	1,729-1,824	19	3.24

ADD $0.17 FOR EACH ADDITIONAL MICROFICHE
(1-96 PAGES)

HOW TO ORDER ERIC DOCUMENTS

EDRS **ERIC**® **DOCUMENT REPRODUCTION SERVICE**

7420 FULLERTON ROAD, SUITE 110
SPRINGFIELD, VA 22153-2852

OPERATED BY

CINCINNATI BELL INFORMATION SYSTEMS (CBIS) FEDERAL
800-443-3742 703-440-1400

IMPORTANT INSTRUCTIONS TO COMPLETE THIS ORDER FORM

- Order by 6 digit ED number
- Enter unit price
- Specify either Microfiche (MF) or Paper Copy (PC)
- Include shipping charges

ED NUMBER	NO. OF PAGES	NO. OF COPIES MF	NO. OF COPIES PC	UNIT PRICE	TOTAL UNIT COST
TOTAL NO. OF PAGES				SUBTOTAL	
UNIT PRICE SCHEDULE				RESIDENTS OF VA, MD AND DC - ADD APPLICABLE SALES TAX	
				SHIPPING CHARGES	
				TOTAL COST	

MICROFICHE (MF)			PAPER COPY (PC)		
NUMBER FICHE EACH ED #	PRICE CODE	Price	NUMBER PAGES EACH ED #	PRICE CODE	Price
1 to 5 (up to 480 pages)	MF01	$1.16	1 to 25	PC01	$3.12
Each additional microfiche (additional 96 pages)		$ .25	Each additional 25 pages		$3.12

CHARTS FOR DETERMINING SHIPPING CHARGES

U.S. POSTAL SERVICE		1st CLASS POSTAGE FOR			MICROFICHE ONLY	
1-7 Microfiche ONLY $0.29	8-19 Microfiche ONLY $0.52	20-30 Microfiche ONLY $0.75	31-42 Microfiche ONLY $0.98	43-54 Microfiche ONLY $1.21	55-67 Microfiche ONLY $1.44	68-80 Microfiche ONLY $1.67

UNITED PARCEL SERVICE CHARGES FOR CONTINENTAL U.S. SHIPMENTS ONLY*

*UPS will not deliver to a P.O. Box Number. A Street Address must be provided.

1 lb. 81-160 MF or 1-75 PC PAGES Not to Exceed $2.79	2 lbs. 161-330 MF or 76-150 PC PAGES Not to Exceed $3.30	3 lbs. 331-500 MF or 151-225 PC PAGES Not to Exceed $3.74	4 lbs. 501-670 MF or 226-300 PC PAGES Not to Exceed $4.09	5 lbs. 671-840 MF or 301-375 PC PAGES Not to Exceed $4.31	6 lbs. 841-1010 MF or 376-450 PC PAGES Not to Exceed $4.53	7 lbs. 1011-1180 MF or 451-525 PC PAGES Not to Exceed $4.77	8 to 10 lbs. 1181-1690 MF 526-750 PC PAGES Not to Exceed $5.17-$5.94

NOTE—Orders for 81 or more microfiche and all orders for paper copies (PC) will be shipped via United Parcel Service unless otherwise instructed.

SEE REVERSE FOR EXPEDITED DOCUMENT DELIVERY SERVICE

PAYMENTS: You may pay by

1. Enclosing CHECK or MONEY ORDER with your order. Foreign customer checks must be drawn on a U.S. bank.
2. Charge to a MasterCard or VISA account. Enter account number, card expiration date and signature. (EDRS also accepts telephone orders when charged to a MasterCard or VISA account.)
3. PURCHASE ORDERS: U.S. customers may enclose an authorized original purchase order. No purchase orders are accepted from foreign customers.
4. Charge to a DEPOSIT ACCOUNT. Enter deposit account number and sign order form.

PLEASE INDICATE METHOD OF PAYMENT AND ENTER REQUIRED INFORMATION.

VISA

WE HONOR BOTH

MasterCard

☐ Check or Money Order ☐ Purchase Order (ATTACH ORIGINAL PURCHASE ORDER)

☐ MasterCard ☐ VISA

Account Number _____ Expiration Date _____

Signature _____

☐ Deposit Account Number _____

Signature _____

ENTER "SHIP TO" ADDRESS _____

_____

_____

CALL TOLL FREE 1-800-443-ERIC (3742) 24 HOURS A DAY - 7 DAYS A WEEK
ALLOW 5 WORKING DAYS FOR EDRS TO PROCESS AND SHIP YOUR ORDER

EXPEDITED DOCUMENT DELIVERY

Expedited delivery of ERIC documents is available.

- Call in your order 24 hours a day toll free 1-800-443-ERIC (3742).
- Fax your order 24 hours a day 703-440-1408.

Your order will be shipped to you, by the method you select, on the fifth (5th) working day after receipt.

To insure expedited receipt, request shipment by either:

- USPS Express Mail
- UPS Next Day Air
- Federal Express
- FAX transmission of your document

Shipping and FAX transmission charges will be added to the cost of the document(s) by EDRS.

These requesting and delivery methods are in addition to the 3-day delivery services available in response to orders received through the use of on-line data base services.

STANDING ORDERS SUBSCRIPTION ACCOUNTS

Subscription orders for documents in the monthly issue of **Resources in Education (RIE)** are available on microfiche from EDRS. The microfiche are furnished on a diazo film base and without envelopes at $0.111 per microfiche. If you prefer a silver halide film base, the cost is $0.225 per microfiche and each microfiche is inserted into a protective envelope. SHIPPING CHARGES ARE EXTRA. A Standing Order Account may be opened by depositing $1,500.00 or submitting an executed purchase order. The cost of each issue and shipping will be charged against the account. A monthly statement of the account will be furnished.

BACK COLLECTIONS

Back collections of documents in all issues of **Resources in Education (RIE)** since 1966 are available on microfiche at a unit price of $0.131 per microfiche. The collections from 1966 through 1985 are furnished on a vesicular film base and without envelopes. Since 1986, collections are furnished on a diazo film base without envelopes. SHIPPING CHARGES ARE EXTRA. For pricing information, write or call toll free 1-800-443-ERIC (3742).

GENERAL INFORMATION

1. PRICE LIST
The prices set forth herein may be changed without notice; however, any price change is subject to the approval of the Contracting Officer/USED/Office of Educational Research and Improvement/Contracts and Grants Management Division.

2. PAYMENT
The prices set forth herein do not include any sales, use, excise, or similar taxes that may apply to the sale of microfiche or paper copy to the Customer. The cost of such taxes, if any, shall be borne by the Customer.

Payment shall be made net thirty (30) days from date of invoice. Payment shall be without expense to CBIS Federal.

3. REPRODUCTION
Express permission to reproduce a copyrighted document provided hereunder must be obtained from the copyright holder noted on the title page of such copyrighted document.

4. CONTINGENCIES
CBIS Federal shall not be liable to Customer or any other person for any failure or delay in the performance of any obligation if such failure or delay (a) is due to events beyond the control of CBIS Federal including, but not limited to, fire, storm, flood, earthquake, explosion, accident, acts of the public enemy, strikes, lockouts, labor disputes, labor shortages, work stoppages, transportation embargoes or delays, failure or shortage of materials, supplies or machinery, acts of God, or acts or regulations or priorities of the federal, state, or local governments; (b) is due to failures of performances of subcontractors beyond CBIS Federal's control and without negligence on the part of CBIS Federal; or (c) is due to erroneous or incomplete information furnished by Customer.

5. LIABILITY
CBIS Federal's liability, if any, arising hereunder shall not exceed restitution of charges.

In no event shall CBIS Federal be liable for special, consequential, or liquidated damages arising from the provision of services hereunder.

6. WARRANTY
CBIS FEDERAL MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO ANY MATTER WHATSOEVER, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

7. QUALITY
CBIS Federal will replace products returned because of reproduction defects or incompleteness. The quality of the input document is not the responsibility of CBIS Federal. Best available copy will be supplied.

8. CHANGES
No waiver, alteration, or modification of any of the provisions hereof shall be binding unless in writing and signed by an officer of CBIS Federal.

9. DEFAULT AND WAIVER
a. If customer fails with respect to this or any other agreement with CBIS Federal to pay any invoice when due or to accept any shipment as ordered, CBIS Federal may, without prejudice to other remedies, defer any further shipments until the default is corrected, or may cancel the order.

b. No course of conduct nor any delay of CBIS Federal in exercising any right hereunder shall waive any rights of CBIS Federal or modify this Agreement.

10. GOVERNING LAW
This Agreement shall be construed to be between merchants. Any questions concerning its validity, construction, or performance shall be governed by the laws of the State of Virginia.

11. DEPOSIT ACCOUNTS
Customers who have a continuing need for ERIC documents may open a Deposit Account by depositing a minimum of $300.00. Once a Deposit Account is opened, ERIC documents will be sent upon request, and the account charged for the actual cost and postage. A monthly statement of the account will be furnished.

12. PAPER COPY (PC)
A paper copy (PC) is a xerographic reproduction, on paper, of the original document. Each paper copy has a Vellum Bristol cover to identify and protect the document.

13. FOREIGN POSTAGE
Postage for all countries other than the United States is based on the International Postage Rates in effect at the time the order is shipped. To determine postage, allow 160 microfiche or 75 (PC) pages per pound. Customers must specify the exact classification of mail desired, and include the postage for that classification with their order. Payment must be in United States funds.

BEST COPY AVAILABLE